

CLAIMS

1. A transparent laminate comprising a transparent plastic substrate and a coating film formed on at least one side of the substrate, wherein

the coating film is formed by applying and curing a liquid primer composition comprising:

- (A) a self-emulsifiable emulsion of a linear polyurethane having a pendant carboxylic acid group and no crosslinked structure between polymer chains;

(B) a sol of an inorganic oxide having a hydrophobic group on the surface; and

- (C) a compound having 5 to 9 carbon atoms and at least one hydroxyl group and at least one oxygen atom other than an oxygen atom constituting a hydroxyl group in the molecule.

2. The transparent laminate of claim 1, wherein a coating film of the self-emulsifiable emulsion (A) has an elongation of 240 to 500 % and a 100 % modulus of 190 kgf/mm² or more

3. The transparent laminate of claim 1 or 2, wherein the linear polyurethane of the self-emulsifiable emulsion (A) has a bisphenol A skeleton.

4. The transparent laminate of claim 1, wherein the liquid primer composition comprises 5 to 400 parts by weight (in terms of an inorganic oxide) of the component (B) and 50 to 3,000 parts by weight of the component (C) based on 100 parts by weight (in terms of nonvolatile matter) of the component (A).

5. The transparent laminate of claim 1, wherein the hydrophobic group is at least one member selected from the group consisting of an alkyl group, acryloxy group-substituted

alkyl group, methacryloxy group-substituted alkyl group, glycidyloxy group-substituted alkyl group and alkylene glycol group having an alkyl group at one terminal.

- 5 6. The transparent laminate of claim 1, wherein the inorganic oxide of the sol (B) is a fine particle of at least one oxide selected from the group consisting of oxides of Si, Al, Sn, Sb, Ta, Ce, La, Fe, Zn, W, Zr, In and Ti and the surface of the fine particle is modified by an organic silane compound represented by the following formula (1) to have a hydrophobic group on the surface:



- wherein R^1 is an alkyl group which may be substituted by a methacryloxy group or glycidyloxy group, R^2 is an alkyl group, 15 X is a hydrolyzable group, a is 0, 1 or 2, and b is 1, 2 or 3, with the proviso that $a + b = 3$.

7. The transparent laminate of claim 1, wherein the inorganic oxide of the sol (B) is a composite oxide containing 20 at least 50 wt% of titanium oxide.

8. The transparent laminate of claim 1, wherein the component (C) is at least one member selected from the group consisting of monoalkyl ether of alkylene glycol, monoalkyl ether of 25 polyalkylene glycol, monoacyl ester of alkylene glycol, monoacyl ester of polyalkylene glycol, 3-methoxy-3-methyl-1-butanol and diacetone alcohol.

9. The transparent laminate of claim 1 which further 30 comprises a hard coat on the coating film of the liquid primer composition.

10. The transparent laminate of claim 9, wherein the hard coat is formed by applying and curing a composition comprising

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(D) a sol of an inorganic oxide which is a fine particle having a particle diameter of 1 to 100 nm of an oxide selected from the group consisting of oxides of Si, Al, Sn, Sb, Ta, Ce, La, Fe, Zn, W, Zr, In and Ti and (E) an epoxy-containing silicon compound represented by the following formula (2) or a hydrolyzate thereof:



wherein R^3 is a group having an epoxy group and 2 to 12 carbon atoms, R^4 is an alkyl group or haloalkyl group having 1 to 6 carbon atoms, alkenyl group having 2 to 6 carbon atoms, phenyl group or halophenyl group, R^5 is a hydrogen atom, alkyl group having 1 to 4 carbon atoms or acyl group, and d is 0, 1 or 2.

11. The transparent laminate of claim 9 which further has an anti-reflection coat on the hard coat.

12. A plastic lens for spectacles which comprises the transparent laminate of claim 9 or 11.

13. A liquid primer composition comprising:

(A) a self-emulsifiable emulsion of a linear polyurethane having a pendant carboxylic acid group and no crosslinked structure between polymer chains;

(B) a sol of an inorganic oxide having a hydrophobic group on the surface; and

(C) a compound having 5 to 9 carbon atoms and at least one hydroxyl group and at least one oxygen atom other than an oxygen atom constituting a hydroxyl group in the molecule.

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